

What Is Claimed Is:

1. In a communication system receiver, a method of adjusting an outer loop threshold (OLT) for power control comprising:

5           obtaining a frame quality indicator; and  
          obtaining a channel quality metric Eb/Nt;  
          if the frame quality indicator is equal to a logic zero,  
          obtaining an average Eb/Nt (avgEbNt); and  
          using Eb/Nt and avgEbNt to calculate a stepsize used to  
10 increase the OLT.

2. The method of claim 1 wherein the stepsize is calculated using the equation  $upDelta = baseUpDelta \cdot (Eb/Nt) / avgEbNt$  and wherein  $baseUpDelta$  is a predetermined scaling factor.

15 3. The method of claim 2 wherein the OLT is increased using the equation  $OLT(n) = OLT(n-1) \times upDelta$ .

4. The method of claim 1 wherein the channel quality metric Eb/Nt is  
20 calculated using the equation  $Eb/Nt = (\sum_{i=1}^N sgn(Out(i)) \cdot ln(i))^2 / (\sum_{i=1}^N ln(i)^2 - (\sum_{i=1}^N sgn(Out(i)) \cdot ln(i))^2)$ .

5. In a communication system receiver having a target frame error rate (tFER), a method of adjusting an outer loop threshold (OLT) for power control comprising:

obtaining a frame quality indicator; and

5 if the frame quality indicator is equal to a logic one for an adaptively determined amount of consecutive frames, decreasing the OLT.

6. The method of claim 5 further comprising using the frame quality indicator to calculate a measured frame error rate (mFER) and wherein the 10 amount of frames is adaptively determined using the equation

adaptively determined amount of frames =  $mFER/tFER^2$ .

7. The method of claim 5 further comprising the steps of:

obtaining channel quality metrics Eb/Nt;

15 obtaining an average Eb/Nt (avgEbNt);

obtaining a minimum Eb/Nt (minEbNt); and

using avgEbNt and minEbNt to calculate a stepsize used to decrease the OLT.

20 8. The method of claim 7 wherein the stepsize is calculated using the equation  $dnDelta = baseDnDelta \cdot avgEbNt / minEbNt$  and wherein baseDnDelta is a predetermined scaling factor.

25 9. The method of claim 8 wherein the OLT is decreased using the equation  $OLT(n) = OLT(n-1) / dnDelta$ .

10. In a communication system receiver having a target frame error rate (tFER), a method of adjusting an outer loop threshold (OLT) for power control comprising:

5                   obtaining a frame quality indicator;  
                  if the frame quality indicator is not equal to a logic zero and the frame quality indicator is not equal to a logic one for an adaptively determined amount of consecutive frames, adjusting the OLT according to a comparison of a fadeDepth(i) and a fadeDepth(i-1).

10       11. The method of claim 10 wherein the OLT is adjusted using the equation  $OLT(i) = OLT(i-1) \cdot floatDelta$ , when  $fadeDepth(i) > fadeDepth(i-1)$ .

12. The method of claim 10 wherein the OLT is adjusted using the equation  $OLT(i) = OLT(i-1) / floatDelta$ , when  $fadeDepth(i) < fadeDepth(i-1)$ .

15